

## Identifying Point of Intersection with Equations

Name: \_\_\_\_\_

For each system of equations determine the point of intersection in a graph.

Answers

1) 
$$\begin{cases} y = -0.2x - 2 \\ y = -0.4x - 4 \end{cases}$$

2) 
$$\begin{cases} y = -4.25x - 8 \\ y = -0.25x + 8 \end{cases}$$

3) 
$$\begin{cases} y = 3.5x + 5 \\ y = 3.25x + 4 \end{cases}$$

4) 
$$\begin{cases} y = 6.5x + 9 \\ y = 4.5x + 5 \end{cases}$$

5) 
$$\begin{cases} y = -2.5x - 8 \\ y = -0.5x - 4 \end{cases}$$

6) 
$$\begin{cases} y = 0.5x - 6 \\ y = 5.5x + 4 \end{cases}$$

7) 
$$\begin{cases} y = -0.1x + 5 \\ y = 0.6x - 2 \end{cases}$$

8) 
$$\begin{cases} y = 1.5x - 7 \\ y = 0.1x + 7 \end{cases}$$

9) 
$$\begin{cases} y = 0.3x - 5 \\ y = -0.3x + 1 \end{cases}$$

10) 
$$\begin{cases} y = 1.8x - 2 \\ y = 0.4x + 5 \end{cases}$$

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

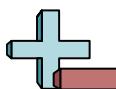
6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



## Identifying Point of Intersection with Equations

Name: **Answer Key**

For each system of equations determine the point of intersection in a graph.

1) 
$$\begin{cases} y = -0.2x - 2 \\ y = -0.4x - 4 \end{cases}$$

$$-0.2x - 2 = -0.4x - 4$$

$$0.2x = -2$$

$$1x = -10$$

$$y = (-0.2 \times -10) - 2$$

$$y = (-0.4 \times -10) - 4$$

2) 
$$\begin{cases} y = -4.25x - 8 \\ y = -0.25x + 8 \end{cases}$$

$$-4.25x - 8 = -0.25x + 8$$

$$-4x = 16$$

$$1x = -4$$

$$y = (-4.25 \times -4) - 8$$

$$y = (-0.25 \times -4) + 8$$

3) 
$$\begin{cases} y = 3.5x + 5 \\ y = 3.25x + 4 \end{cases}$$

$$3.5x + 5 = 3.25x + 4$$

$$0.25x = -1$$

$$1x = -4$$

$$y = (3.5 \times -4) + 5$$

$$y = (3.25 \times -4) + 4$$

4) 
$$\begin{cases} y = 6.5x + 9 \\ y = 4.5x + 5 \end{cases}$$

$$6.5x + 9 = 4.5x + 5$$

$$2x = -4$$

$$1x = -2$$

$$y = (6.5 \times -2) + 9$$

$$y = (4.5 \times -2) + 5$$

5) 
$$\begin{cases} y = -2.5x - 8 \\ y = -0.5x - 4 \end{cases}$$

$$-2.5x - 8 = -0.5x - 4$$

$$-2x = 4$$

$$1x = -2$$

$$y = (-2.5 \times -2) - 8$$

$$y = (-0.5 \times -2) - 4$$

6) 
$$\begin{cases} y = 0.5x - 6 \\ y = 5.5x + 4 \end{cases}$$

$$0.5x - 6 = 5.5x + 4$$

$$-5x = 10$$

$$1x = -2$$

$$y = (0.5 \times -2) - 6$$

$$y = (5.5 \times -2) + 4$$

7) 
$$\begin{cases} y = -0.1x + 5 \\ y = 0.6x - 2 \end{cases}$$

$$-0.1x + 5 = 0.6x - 2$$

$$-0.7x = -7$$

$$1x = 10$$

$$y = (-0.1 \times 10) + 5$$

$$y = (0.6 \times 10) - 2$$

8) 
$$\begin{cases} y = 1.5x - 7 \\ y = 0.1x + 7 \end{cases}$$

$$1.5x - 7 = 0.1x + 7$$

$$1.4x = 14$$

$$1x = 10$$

$$y = (1.5 \times 10) - 7$$

$$y = (0.1 \times 10) + 7$$

9) 
$$\begin{cases} y = 0.3x - 5 \\ y = -0.3x + 1 \end{cases}$$

$$0.3x - 5 = -0.3x + 1$$

$$0.6x = 6$$

$$1x = 10$$

$$y = (0.3 \times 10) - 5$$

$$y = (-0.3 \times 10) + 1$$

10) 
$$\begin{cases} y = 1.8x - 2 \\ y = 0.4x + 5 \end{cases}$$

$$1.8x - 2 = 0.4x + 5$$

$$1.4x = 7$$

$$1x = 5$$

$$y = (1.8 \times 5) - 2$$

$$y = (0.4 \times 5) + 5$$

**Answers**1. (-10, 0)2. (-4, 9)3. (-4, -9)4. (-2, -4)5. (-2, -3)6. (-2, -7)7. (10, 4)8. (10, 8)9. (10, -2)10. (5, 7)